HIGH PRESSURE TUBE CLEANING APPARATUS

ABSTRACT OF THE INVENTION

An assembly for rotating and axially directing a high pressure spray hose and spray head to clean residue from the bores of thermal transfer tubes. The assembly includes a number of subassemblies that are concentrically aligned and mounted to rotate in synchrony and direct a high-pressure hose and spray head. A hose cleaning subassembly washes and/or brushes the hose exterior with a low-pressure spray. A hose drive assembly controls axial hose movement via driven gears and chains and four polyurethane pinch wheels that abut the hose. Spring tensioners control the wheel-to-hose pressure. A layering arm extends from a driven reel axle and stacks the hose in uniform layer onto an adjustable hub at a driven reel. The diameter of the reel hub can adjusted relative to an outer cage. The hose reel, axial hose drive and hose cleaner assemblies can be operated at speeds rotational speeds of 60 rpm to 650 rpm and whereby tubes from ½ to 6-inch diameters can be cleaned at rates of 1 to 80 feet per minute.